

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A preparation method for low-density rigid polyurethane foam excelling in ~~the flame retardance and the dimensional stability, wherein a~~ rigid polyurethane foam having ~~the an~~ average value for ~~the a~~ ratio of lengthwise direction diameter/cross direction diameter of cells ~~being of~~ 1.0 to 1.4 and ~~the a~~ density of 20 to 40 kg/m³ is prepared by combining, as blowing agent, carbon dioxide generated in the reaction between water and polyisocyanate and carbon dioxide under supercritical state, subcritical state or liquid state, and by adding said water and said carbon dioxide under liquid state into said polyol component, which polyol component is being transferred in a flow path to a mixing head and the addition occurs prior to mixing the polyisocyanate component and the polyol component in the mixing head, and the polyol component prepared by combining the water and the carbon dioxide under liquid state is kept under a state which corresponds to supercritical state of carbon dioxide or subcritical state of carbon dioxide in the flow path to the mixing head, wherein

a closed-cell content is from 70 to 85% and a water vapor permeance is less than 420 ng/(m²·S·Pa) at a thickness of 25 mm, and wherein

said water is mixed in an amount of 5 to 8 parts by weight to 100 parts by weight of polyol in said polyol component, and said carbon dioxide under liquid state is mixed in an amount of 0.5 to 3 % by weight to a sum of said polyisocyanate component and said polyol component.

2. (Canceled)

3. (Canceled)

4. (Currently Amended) The preparation method according to claim 1, wherein an aromatic polyester polyol is present at in an amount of 60 to 90 parts by weight to 100 parts by weight of said polyol.

5. (Currently Amended) The preparation method according to claim 1, wherein a flame retardant is added to the polyurethane foam as an additive, and wherein the flame retardant is ~~compounded at an~~mixed in an amount of 20 to 40 parts by weight to 100 parts by weight of said polyol.

6. (Previously Presented) Rigid polyurethane foam obtained by the method according to claim 1.

7. (Canceled)

8. (Canceled)

9. (Previously Presented) Rigid polyurethane foam obtained by the method according to claim 4.

10. (Previously Presented) Rigid polyurethane foam obtained by the method according to claim 5.

11. (New) The preparation method according to claim 1, wherein the average value for the ratio of lengthwise direction diameter/cross direction diameter of cells of the rigid polyurethane foam is from 1.0 to 1.2.